

Serial No. 09/750,921
Amdt. dated August 27, 2004
Reply to Office Action dated June 4, 2004

Docket No. P-0170

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3-18 and 20 are pending in the present application. Claims 2 and 19 have been canceled and claims 1, 6 and 20 have been amended by the present amendment.

In the outstanding Office Action, it was indicated that the claim for priority cannot be based on the Korean priority application because the U.S. patent application was filed more than twelve months after the priority date; claims 1-3 were rejected under 35 U.S.C. § 103(a) as unpatentable over Elgamal et al.; claim 4 was rejected under 35 U.S.C. § 103(a) as unpatentable over Elgamal et al. in view of Binding; claims 5, 6, 8, 10-15 and 18 were rejected under 35 U.S.C. § 103(a) over Elgamal et al. in view of Chen; claims 16, 17 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Elgamal et al. in view of Chen and Binding; and claims 7, 9 and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Elgamal et al. in view of Chen and Wall.

Regarding the indication that the claim for priority cannot be perfected, it is respectfully noted that the application was filed on the first possible day the Patent Office was open after the priority date of December 30, 1999. That is, the Patent Office was closed on December 30, 2000, which was a Sunday, was closed on December 31, 2000, which was a holiday (New Year's Eve) and closed on January 1, 2001, which was New Year's Day.

Serial No. 09/750,921
Amdt. dated August 27, 2004
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Docket No. P-0170

Accordingly, the first possible day that the application could be filed was January 2, 2001 in which the present application was filed. Therefore, the application is able to claim priority for Korean Application No. 66105/1999 filed on December 30, 1999. Please accordingly update the records.

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Elgamal et al.. This rejection is respectfully traversed.

The present invention is directed to a security protocol structure in an application layer including a secure session layer between a session layer and an application layer. Further, the secure session layer provides a data security function in the application layer, and includes a secured session layer security (SSLS) protocol to provide a secure session interface to an application program. In addition, secure communication is established between a server and a client using the SSLS protocol and without using a certificate or public/private key generation operation.

The present application specifically teaches that the related art WTLS has various problems. For example, since the WTLS 23 (see Figure 1) provides data security at a layer right above the transport layer 12, it does not provide any data security in an application layer 16. Specifically, the current WAP standard does not define the functions of data integrity, data security, and user authentication at all. Hence, a specific unit must be defined in order to provide data security in the application layer (see page 3, lines 1-5).

Serial No. 09/750,921
Amdt. dated August 27, 2004
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Docket No. P-0170

In addition, the memory capacity and/or a CPU processing power of the current terminal is inappropriate to deal with user authentication using a certificate or public/private key generation operation that the WTLS deals with, and the protocol format proposed by the WTLS is complicated. Thus, the overload in data generation and decryption can never be ignored (see page 3, lines 6-10).

That is, the present specification recognized specific problems with the related art WTLSs and solves the problems by providing a secure session layer between a session layer and an application layer. Further, as illustrated in a non-limiting example of Fig. 4, the secure communication is established between a server and a client using the SSLS protocol and without using a certificate or public/private key generation operation. Compare this to the background art of Fig. 2, in which a certificate and public/private key generation operation is required.

The Office Action recognizes Elgamal et al. does not expressly teach a secure session layer between a session layer and an application layer but indicates it would have been obvious to a person of ordinary skill in the art to modify the secure socket layer protocol in the internet model to accommodate the secure session layer in the OSI model. However, it is respectfully noted Elgamal et al. is not related to a wireless application environment and teaches the use of certificates and public/private key generations operations as shown in Figs. 4-7, for example. Elgamal et al. does not teach or suggest establishing secure

Serial No. 09/750,921
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Docket No. P-0170

communication between a server and a client using the SSLS protocol and without using a certificate or public/private key generation operation as claimed by the present invention.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom patentably define over Elgamal et al.

Further, regarding the other independent claim 6, which has been amended to include subject matter similar to that recited in claim 19 and to recite that the fourth message indicates a secure communication has been established between a server generating the server random value and the client, the Office Action indicates with regards to claim 19 that Elgamal et al. teaches a wireless application protocol (see item 42 at page 13 of the Office Action). However, it is respectfully noted Elgamal et al. does not teach or suggest such a wireless application protocol. Further, it is respectfully noted Elgamal et al. also does not teach or suggest the claimed receiving, determining, extracting and generating steps disclosed in independent claim 6. In addition, the additional secondary references applied by the Office Action are also not related to wireless application protocols.

As noted above, the present invention specifically recognized security problems related to such a wireless application protocol and solves these problems by providing the secure session layer. None of the applied references recognize the problems related to the wireless application protocol layer, and thus it is respectfully submitted one skilled in the art would not apply the combination of the references to achieve the claimed invention.

Serial No. 09/750,921
Amdt. dated August 27, 2004
Reply to Office Action dated June 4, 2004

Docket No. P-0170

Accordingly, it is respectfully submitted each of the rejections noted in the outstanding Office Action have been overcome and independent claims 1 and 6 and each of the claims depending therefrom are allowable.

Further, the specification has been amended to correct minor informalities. No new matter has been added.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, David A. Bilodeau, at the telephone number listed below.

Serial No. 09/750,921
Amdt. dated August 27, 2004
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Docket No. P-0170

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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